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09/748,126	12/27/2000	Young-hoon Kim	400999	4152

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EXAMINER	
CANTELMO, GREGG	

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/748,126	KIM, YOUNG-HOON	
	Examiner	Art Unit	
	Gregg Cantelmo	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Gregg Cantelmo 1/6/04

DETAILED ACTION

Response to Amendment

1. In response to the amendment received December 11, 2003:

   a. Claims 1-6 are pending. Non-elected claims 7-12 have been cancelled;

   b. The prior art rejections of record stand.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 now recites:

> "... a fluoride resin formed by electrostatically applying a fluoride resin powder between the lead terminal and the case, heating the fluoride resin powder, and curing to produce the fluoride resin ...".

The latter part of this claim recites "to produce the fluoride resin" however the language used is indefinite as to the nature of the fluoride resin. The heating and curing is said to produce the fluoride resin. Yet, it would appear that the fluoride resin is present prior to heating and curing. Therefore it would not be understood how the process produces a fluoride resin when such resin existed before the process itself.

For the record, the claim has been interpreted that the portion of the claim reciting "to produce the fluoride resin" is a fluoride resin insulation, seal or adhesive as described in the specification of the instant application.

Claim Rejections - 35 USC § 102/103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 56-152160-A (JP '160).

JP '160 discloses a prismatic sealed battery (lone figure), comprising a case 1/2 for accommodating and hermetically sealing a power generating element, a lead terminal 4 connected to a first electrode of the power generating element and inserted

into an opening of the case and led outside, a fluoride resin 8 between the lead terminal 4 and the case insulating the lead terminal to the case wherein a second electrode 6 is connected to the case 1/2 (lone figure and abstract as applied to claim 1).

The case includes a can 2 having an opening and a cap plate 1 having a through hole welded to the can at the opening (abstract and figure as applied to claim 2).

The lead terminal 4 includes a head and a connecting portion inserted into the opening of case 1 (lone figure as applied to claim 3).

The fluoride resin is Teflon, i.e., polytetrafluoroethylene (abstract as applied to claim 6).

Both the prior art product and instant application product use methods for forming a fluoride layer between the terminal and the case. In the instant application fluoride particles are electrostatically deposited to form a *layering* (p. 6, ll. 19-26 of the instant application's specification) and the fluoride is then *cured* (paragraph bridging pages 6 and 7 of the instant application's specification) to effectively *fix and seal* the cap plate and terminal (page 7, ll. 6-11 of the instant application's specification), the end result of the electrostatic deposition process in the instant application results in the formation of a fluoride layer. Since the prior art product has the same product as recited in the instant claims, and the claim is interpreted as a product-by-process claim, it has been established that if the product is the same in the prior art and claimed invention, then the prior art anticipates the product even though the prior art product may be formed by a different process.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

Response to Arguments

5. Applicant's arguments with respect to claims 1-3 and 6 have been considered but are moot in view of the new ground(s) of rejection.

The amendment to claim 1 has necessitated the new grounds of rejection as set forth above.

Applicant argues that the prior art of record does not teach of forming the fluoride resin by the same process. This argument is not persuasive for the reasons set forth above.

As stated above, both the prior art product and instant application product use methods for forming a fluoride layer between the terminal and the case. In the instant application fluoride particles are electrostatically deposited to form a *layering* (p. 6, ll. 19-26 of the instant application's specification) and the fluoride is then *cured* (paragraph bridging pages 6 and 7 of the instant application's specification) to effectively *fix and seal* the cap plate and terminal (page 7, ll. 6-11 of the instant application's specification), the end result of the electrostatic deposition process in the instant application results in the formation of a fluoride layer. Since the prior art product has the same product as recited in the instant claims, and the claim is interpreted as a product-by-process claim, it has been established that if the product is the same in the prior art and claimed invention, then the prior art anticipates the product even though the prior art product may be formed by a different process. See MPEP § 2113, incorporated herein.

Claim Rejections - 35 USC § 102/103

6. Claims 1-5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 10-340709-A (JP '709).

JP '709 discloses a prismatic sealed battery, comprising a case 1 for accommodating and hermetically sealing a power generating element, a lead terminal 4

connected to a first electrode of the power generating element and inserted into an opening of the case and led outside, a fluoride resin 13 between the lead terminal 4 and the case insulating the lead terminal to the case wherein a second electrode is connected to the case via electrode tab 11 (Figures 1, 2, and 4, abstract, paragraphs [0007] and [0009] as applied to claim 1).

The case includes a can 1 having an opening and a cap plate 3 having a through hole welded to the can at the opening (abstract and Figs. 1, 2 and 4 as applied to claim 2).

The lead terminal 4 includes a head and a connecting portion inserted into the opening of case 1 (Figs. 1, 2 and 4 as applied to claim 3).

The electrode terminal (pin) is aluminum (paragraph [0009] as applied to claim 4).

The case is made of a nickel-plated material (paragraph [0006] as applied to claim 5).

Both the prior art product and instant application product use methods for forming a fluoride layer between the terminal and the case. In the instant application fluoride particles are electrostatically deposited to form a *layering* (p. 6, ll. 19-26 of the instant application's specification) and the fluoride is then *cured* (paragraph bridging pages 6 and 7 of the instant application's specification) to effectively *fix and seal* the cap plate and terminal (page 7, ll. 6-11 of the instant application's specification), the end result of the electrostatic deposition process in the instant application results in the formation of a fluoride layer. Since the prior art product has the same product as recited in the instant

claims, and the claim is interpreted as a product-by-process claim, it has been established that if the product is the same in the prior art and claimed invention, then the prior art anticipates the product even though the prior art product may be formed by a different process.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

Response to Arguments

7. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

The amendment to claim 1 has necessitated the new grounds of rejection as set forth above.

Applicant argues that the prior art of record does not teach of forming the fluoride resin by the same process. This argument is not persuasive for the reasons set forth above.

As stated above, both the prior art product and instant application product use methods for forming a fluoride layer between the terminal and the case. In the instant application fluoride particles are electrostatically deposited to form a *layering* (p. 6, ll. 19-26 of the instant application's specification) and the fluoride is then *cured* (paragraph bridging pages 6 and 7 of the instant application's specification) to effectively *fix and seal* the cap plate and terminal (page 7, ll. 6-11 of the instant application's specification), the end result of the electrostatic deposition process in the instant application results in the formation of a fluoride layer. Since the prior art product has the same product as recited in the instant claims, and the claim is interpreted as a product-by-process claim, it has been established that if the product is the same in the prior art and claimed invention, then the prior art anticipates the product even though the prior art product may be formed by a different process. See MPEP § 2113, incorporated herein.

Claim Rejections - 35 USC § 102/103

8. Claims 1-6 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. patent No. 6,143,442 (Takahashi).

Takahashi discloses a prismatic sealed battery, comprising a case 1 for accommodating and hermetically sealing a power generating element, a lead terminal 4 connected to a first electrode of the power generating element and inserted into an opening of the case and led outside, a fluoride resin 13 between the lead terminal 4 and the case insulating the lead terminal to the case wherein a second electrode is connected to the case via electrode tab 11 (Figures 1, 2, and 4, abstract, col. 3, ll. 25-30 and 48-53 as applied to claim 1).

The case includes a can 1 having an opening and a cap plate 3 having a through hole welded to the can at the opening (abstract and Figures 1, 2 and 4 as applied to claim 2).

The lead terminal 4 includes a head and a connecting portion inserted into the opening of case 1 (Figs. 1, 2 and 4 as applied to claim 3).

The electrode terminal (pin) is aluminum (col. 3, ll. 48-53 as applied to claim 4).

The case is made of a nickel-plated material (col. 3. ll. 14-16 as applied to claim 5).

The fluoride resin is a fluorocarbon (col. 3, ll. 48-52 as applied to claim 6).

Both the prior art product and instant application product use methods for forming a fluoride layer between the terminal and the case. In the instant application fluoride

particles are electrostatically deposited to form a *layering* (p. 6, ll. 19-26 of the instant application's specification) and the fluoride is then *cured* (paragraph bridging pages 6 and 7 of the instant application's specification) to effectively *fix and seal* the cap plate and terminal (page 7, ll. 6-11 of the instant application's specification), the end result of the electrostatic deposition process in the instant application results in the formation of a fluoride layer. Since the prior art product has the same product as recited in the instant claims, and the claim is interpreted as a product-by-process claim, it has been established that if the product is the same in the prior art and claimed invention, then the prior art anticipates the product even though the prior art product may be formed by a different process.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to

come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

Response to Arguments

9. Applicant's arguments with respect to claims 1- 6 have been considered but are moot in view of the new ground(s) of rejection.

The amendment to claim 1 has necessitated the new grounds of rejection as set forth above.

Applicant argues that the prior art of record does not teach of forming the fluoride resin by the same process. This argument is not persuasive for the reasons set forth above.

As stated above, both the prior art product and instant application product use methods for forming a fluoride layer between the terminal and the case. In the instant application fluoride particles are electrostatically deposited to form a *layering* (p. 6, ll. 19-26 of the instant application's specification) and the fluoride is then *cured* (paragraph bridging pages 6 and 7 of the instant application's specification) to effectively *fix and seal* the cap plate and terminal (page 7, ll. 6-11 of the instant application's specification), the end result of the electrostatic deposition process in the instant application results in the formation of a fluoride layer. Since the prior art product has the same product as recited in the instant claims, and the claim is interpreted as a

product-by-process claim, it has been established that if the product is the same in the prior art and claimed invention, then the prior art anticipates the product even though the prior art product may be formed by a different process. See MPEP § 2113, incorporated herein.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '709 in view of Takahashi.

The teachings of claim 1, with respect to JP '709, have been discussed above and are incorporated herein.

The difference between JP '709 and claim 6 is that JP '709 does not appear to expressly state that the fluororesin is one of the materials recited in claim 6.

Takahashi is drawn to the same field of endeavor and further is noted to claim priority to JP '709. Takahashi further states that the fluororesin is a fluorocarbon (col. 3, ll. 48-53).

The motivation for selecting the fluororesin to be a fluorocarbon is that it provides an excellent insulating material between the electrode pin and the can of the prismatic cell.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of JP '709 by selecting the fluororesin to be a fluorocarbon since it would have provided an excellent insulating material between the electrode pin and the can of the prismatic cell. The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945) See also In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). MPEP § 2144.07.

Response to Arguments

12. Applicant makes no arguments to the 103 rejection presented in item 11. It would appear then that the only argument(s) to this rejection are the argument(s) set forth toward 102 rejection of JP '709 above, incorporated herein. Since the prior art rejection of JP '709 has been maintained and there are no further arguments to the 103 rejection above, the 103 rejection also stands.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPAT No. 4,127,706 discloses electrostatic deposition of fluoride resins (PTFE) for use in various components in a battery.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (571) 272-1283. The examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached at (571) 272-1292. FAX communications should be sent to FAX number: (703) 872-9306. FAXES received after 4 p.m. will not be processed until the following business day. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

Gregg Cantelmo
Patent Examiner
Art Unit 1745

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January 6, 2004